Special Issue

Characterization and Numerical Simulation of Solid Wood and Engineered Wood Products

Message from the Guest Editor

The complexity of wood as an anisotropic, heterogeneous, and hygroscopic material poses significant challenges for accurate characterization and modeling. This Special Issue aims to gather cutting-edge research on the experimental and numerical investigation of both solid wood and wood-based engineered products, including laminated veneer lumber (LVL), cross-laminated timber (CLT), glued laminated timber (glulam), and wood–polymer composites (WPCs). Contributions are welcome in areas such as physical and mechanical testing, moisture-related behavior, durability assessments, and multi-scale modeling techniques. Studies that focus on the integration of advanced characterization methods (e.g., X-ray CT, DIC, spectroscopy) and computational modeling (e.g., FEM, XFEM, machine learning) are particularly encouraged. The goal of this issue is to bridge the gap between experimental research and predictive simulation tools, providing insights that support the optimization, design, and application of wood-based materials in modern engineering. Original research articles, review papers, and case studies are welcome.

Guest Editor

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Forests (ISSN 1999-4907) is an international and cross-disciplinary, scholarly forestry journal. The distinguished editorial board and refereeing process ensures the highest degree of scientific rigor and review of all published articles. Original research articles and timely reviews are released online, with unlimited free access. Our goal is to have *Forests* be recognized as one of the foremost publication outlets for high quality, leading edge research in this broad and diverse field. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global forestry community.

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